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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,778	01/21/2004	Wei-Chih Chang	250809-1050	3542
24504	7590	11/29/2005	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			KRAMSKAYA, MARINA	
			ART UNIT	PAPER NUMBER
			2858	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/761,778

Applicant(s)

CHANG ET AL.

Examiner

Marina Kramskaya

Art Unit

2858

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 12 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the parallel connection to the X film of the first Y capacitor and the parallel connection to the Y film of the first X capacitor must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The switching of the limitation:

*an X film having a first X terminal and a second X terminal;*

*a Y film having a first Y terminal and a second Y terminal;*

to the newly added limitation

*an X film having a first Y terminal and a second Y terminal;*

*a Y film having a first X terminal and a second X terminal;*

raises new matter issues, since the replacement of the X terminals with Y terminals significantly changes the scopes of the invention.

Additionally the limitation of "a first X capacitor electrically connected to the Y film in parallel" and "a first Y capacitor electrically connected to the X film in parallel" raises issues of new matter, since no parallel electrical connection of the Y film to the X capacitor or a parallel electrical connection of the X film to the Y capacitor has been

shown in the drawings or described in detail in the specification in such a way as to reasonably convey to one skilled in the art the invention.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalthoff et al., US 6,246,394, in view of Carpenter et al., Us 6,639,587.

For the purpose of this examination the claimed "X film" will be interpreted as the "Y film" and the claimed "Y film" will be interpreted as the "X film" since coordinates can be switched to interpreted the location in any vector space.

As per Claim 1, Kalthoff et al. discloses a film positioning device **1** for detecting a position of a contact point **Q**, the device comprising:

- an X film ("Y film" **31**) having a first Y terminal **53** and a second Y terminal **52**;
- a Y film ("X film" **30**) having a first X terminal **51** and a second X terminal **50**;
- a first Y switch **21** coupled between the first Y terminal **53** and a ground (connected to **21**);

- a second Y switch **20** coupled between the second Y **52** terminal and a power source **+Vcc**;
  - a first X switch **19** coupled between the first X terminal **51** and the ground (connected to **20**);
  - a second X switch **18** coupled between the second X terminal **50** and the power source **+Vcc**;
  - wherein when the film positioning device detects an X coordinate of the contact point, the first Y switch and the second Y switch are turned on, and then the X coordinate is obtained according to a voltage at the first X terminal **x-** or the second X terminal **x+**; (FIG. 4). Kalthoff's FIG. 4 is equivalent to applicants FIG. 4A, and the X coordinate can be derived by the voltage at **24**, across the resistor  $R_{x1}$ .
  - wherein when the film positioning device detects a Y coordinate of the contact point, the first X switch and the second X switch are turned on, and then the Y coordinate is obtained according to a voltage at the first Y terminal **y-** or the second Y terminal **y+** (FIG. 3). Kalthoff's FIG. 3 is equivalent to applicants FIG. 4B, and the Y coordinate can be derived by the voltage at **26**, across the resistor  $R_{y1}$ .
- Kalthoff does not disclose:
- a first X capacitor coupled between the first X terminal and the second X terminal and electrically connected to the Y film in parallel; and

- a second Y capacitor coupled between the first Y terminal and the second Y terminal and electrically connected to the X film in parallel.

Carpenter discloses a positioning device having:

- a first X capacitor ( $C_x$ , **116**) coupled between the first X terminal ( $X_1$ , **120**) and the second X terminal ( $X_2$ , **122**) and electrically connected to the Y film in parallel (through the bus connection point at the controller); and
- a second Y capacitor ( $C_y$ , **118**) coupled between the first Y terminal ( $Y_1$ , **124**) and the second Y terminal ( $Y_2$ , **126**) and electrically connected to the X film in parallel (through the bus connection point at the controller), see FIG. 2.

Therefore, it would have been obvious to a person of ordinary skill in the art to include a capacitor between the Y terminals and a capacitor between the X terminals, as taught by Carpenter, in the position sensing device of Kalthoff, in order to accurately detect the X-resistance and the Y-resistance, through the appropriate discharge rate of the capacitors.

As per Claim 2, Kalthoff further discloses the positioning device, wherein the X film and the Y film are plane resistors (i.e. "resistive sheets", ABS., lines 1-4).

As per Claim 3, Kalthoff further discloses the positioning device, wherein the first Y switch **21**, the second Y switch **20**, the first X switch **19** and the second X switch **18** are transistors (column 2, lines 65-67, see FIG. 1).

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6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalthoff in view of Carpenter, as applied to claim 1 above, and further in view of Teterwak, US 5,841,427.

Kalthoff in view of Carpenter disclose a position sensing device as applied to Claim 1, above.

Kalthoff, as modified, does not disclose:

a first noise-reduction capacitor coupled between the first X terminal and the ground;

a second noise-reduction capacitor coupled between the second X terminal and the ground;

a third noise-reduction capacitor coupled between the first Y terminal and the ground; and

a fourth noise-reduction capacitor coupled between the second Y terminal and the ground.

Teterwak discloses a position sensing device having:

a first noise-reduction capacitor (part of 40, see detail in FIG. 3) coupled between the first X terminal **18A** and the ground;

a second noise-reduction capacitor (part of 40, see detail in FIG. 3) coupled between the second X terminal **18C** and the ground;

a third noise-reduction capacitor (part of 40, see detail in FIG. 3) coupled between the first Y terminal **18B** and the ground; and



a fourth noise-reduction capacitor (part of 40, see detail in FIG. 3) coupled between the second Y terminal **18D** and the ground.

In effect, each terminal 18A-D is connected to an RC network, each having a capacitor connected thereto, as detailed in FIG. 3, with a capacitor C1. The capacitors provide noise reduction by matching the ITO layer 26 (column 4, lines 16-21) which is the layer that provides noise reduction (column 3, lines 26-28).

Therefore, it would have been obvious to a person of ordinary skill in the art to connect a capacitor to each terminal, as taught by Teterwak, in the position sensor of Kalthoff, in order to improve sensing of the resistive layers.

### ***Response to Arguments***

7. Applicant's arguments filed 09/12/2005 have been fully considered but they are not persuasive.

8. The applicant's arguments present a detailed explanation of the new claim limitations. However, the new limitations raise issues of new matter, addressed by the examiner above.

As per the combination of the teachings found in Kalthoff and Carpenter, it would have been obvious to a person of ordinary skill in the art to include a capacitor between the Y terminals and a capacitor between the X terminals, as taught by Carpenter, in the position sensing device of Kalthoff, in order to accurately detect the X-resistance and the Y-resistance, through the appropriate discharge rate of the capacitors.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

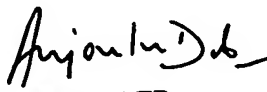
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Kramskaya whose telephone number is (571)272-2146. The examiner can normally be reached on M-F 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571)272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MK

  
ANJAN DEB  
PRIMARY EXAMINER

Marina Kramskaya  
Examiner  
Art Unit 2858

